

U.S.S.N. 09/760,362
CHEN
PRELIMINARY AMENDMENT & RCE

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently amended) A method to treat neovascular disease of the eye, comprising:

administering a conjugate comprising a targeted photosensitizing compound conjugated to a targeting moiety that selectively binds to abnormal endothelium that lines or composes neovascular target tissue in the eye;

allowing sufficient time to permit the non-specifically bound conjugate to clear from non-target tissue; and

illuminating the neovascular tissue with light including a wavelength corresponding at least in part with the characteristic light absorption wavelength of the photosensitizing compound for a period of time sufficient to activate the photosensitizing compound; compound wherein:

~~thereby causing damage to neovascular tissue, but without impairing or destroying other tissue, wherein~~

a combination of an intensity of light used for the step of illuminating and a duration of illumination is selected to produce a total fluence of irradiation such that the neovascular target tissue is destroyed and the non-target tissue through which the light passes remains undamaged.

2. (Previously presented) The method of claim 1, wherein the light is non-coherent light.

3. (Previously presented) The method of claim 1, wherein the light is coherent light.

4. (Previously presented) The method of claim 1, wherein the neovascular tissue is present in retina, choroid or both.

5. (Original) The method of claim 1, wherein the treated neovascular disease is diabetic retinopathy.

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6. (Original) The method of claim 1, wherein the treated neovascular disease is macular degeneration.

Claims 7 - 10 (Cancelled)

11. (Currently amended) The method of claim 1, wherein the ~~targeted photosensitizing compound is bound to~~ targeting moiety is a first member of a binding pair and wherein a second member of the binding pair is selected from the group consisting of a receptor present on abnormal endothelium; a ligand bindable to a receptor present on abnormal endothelium; an antigen present on abnormal endothelium; and an antibody bindable to an antigen present on abnormal endothelium.

12. (Currently amended) The method of claim 11, wherein the ~~targeted photosensitizing compound~~ conjugate is incorporated into a liposomal preparation.

Claims 13 -15 (Cancelled)

16. (Currently amended) The method of claim 1, wherein the ~~targeted photosensitizing compound is bound to~~ targeting moiety is a bi-specific antibody construct that further comprises both a ligand component and a receptor component.

17. (Currently amended) The method of claim 16, wherein the ~~targeted photosensitizing compound~~ conjugate is incorporated into a liposomal preparation.

18. (Previously presented) The method of claim 1, wherein the photosensitized neovascular tissue is illuminated for at least 4 minutes.

19. (Previously presented) The method of claim 1, wherein the photosensitized neovascular tissue is illuminated for at least 20 minutes.

20. (Previously presented) The method of claim 1, wherein the photosensitized neovascular tissue is illuminated for at least 1 hour.

21. (Previously presented) The method of claim 1, wherein the photosensitized neovascular tissue is illuminated for at least 24 hours.

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22. (Currently amended) The method of claim 1, wherein the neovascular tissue is treated with a total fluence of light irradiation from between about 240 J/cm² to about 900 J/cm².

23. (Previously presented) The method of claim 2, wherein the non-coherent light source is a light emitting diode.

24. (Previously presented) The method of claim 2, wherein the non-coherent light source is ambient light.

Claims 25 - 35 (Cancelled)

36. (Original) A method of instructing a person to treat neovascular disease of the eye, comprising instructing a person to conduct a method according to claim 1.

37. (Cancelled)

38. (Currently amended) The method of claim 1, wherein the ~~targeted photosensitizing compound is conjugated to~~ targeting moiety is an antibody that binds to a VEGF receptor.

39. (Currently amended) The method of claim 1, wherein the ~~targeted photosensitizing compound is conjugated to~~ targeting moiety is VEGF.

40. (Currently amended) The method of claim 1, wherein the ~~targeted photosensitizing compound binds to~~ targeting moiety is a VEGF receptor.

41. (Currently amended) The method of claim 1, wherein the ~~targeted~~ photosensitizing compound is a chlorin.

42. (New) The method of claim 1, wherein the photosensitizing compound is selected from the group consisting of chlorins, bacteriochlorophylls, phthalocyanines, porphyrins, purpurins, merocyanines, psoralens, benzoporphyrin derivatives (BPD), porfimer sodium, δ -aminolevulinic acid protoporphyrin, indocyanine green (ICG), methylene blue, toluidine blue, texaphyrins, pyropheophorbide compounds, bacteriochlorophyll derivatives, alkyl ether analogs of chlorins, verteporfin and benzoporphyrin derivatives.

43. (New) The method of claim 1, wherein the photosensitizing compound is verteporfin or texaphyrin.

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44. (New) The method of claim 1, wherein the photosensitizing compound is indocyanine green.

45. (New) The method of claim 1, wherein a combination of an intensity of light of less than 500 mW/cm^2 and a duration of illumination of at least 4 minutes is selected to produce a total fluence of light irradiation from between about 30 J/cm^2 to about $25,000 \text{ J/cm}^2$.

46. (New) A method to treat neovascular disease of the eye, comprising:

administering a targeted photosensitizing compound that selectively binds to abnormal endothelium that lines or composes neovascular tissue in the eye; and

illuminating the neovascular tissue with light for a period of time sufficient to activate the photosensitizing compound thereby causing damage to neovascular tissue, but without impairing or destroying other tissue, wherein

a combination of an intensity of light used for the step of illuminating and a duration of illumination is selected to produce a total fluence of irradiation such that the neovascular tissue is destroyed and the non-target tissue through which the light passes remains undamaged, wherein

the neovascular tissue is treated with a total fluence of light irradiation from between about 240 J/cm^2 to about 900 J/cm^2 .

47. (New) The method of claim 46, wherein the light is non-coherent light.

48. (New) The method of claim 47, wherein the non-coherent light source is a light emitting diode.

49. (New) The method of claim 47, wherein the non-coherent light source is ambient light.